Temperature Fiber Optic Sensing System (TEMP)

Completed Technology Project (2017 - 2018)

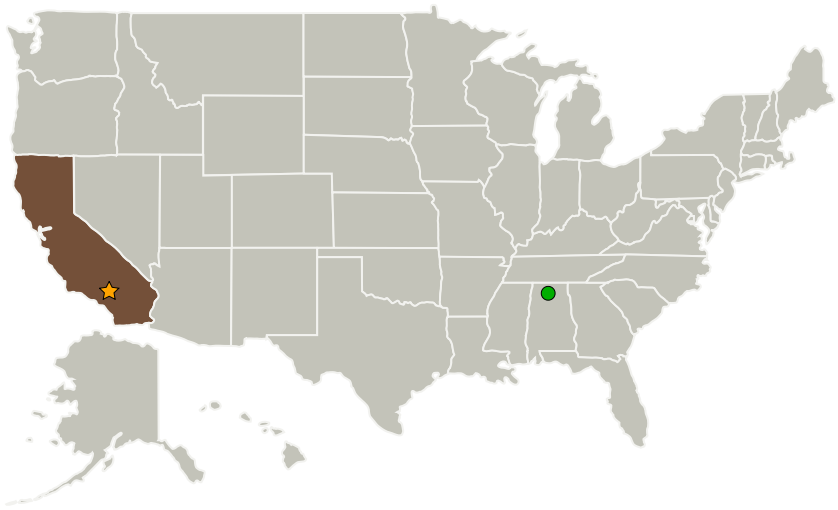
Project Introduction

We're going to bake the fiber to take out all the moisture, then vacuum all the air out, fill it with a different gas (Helium) and seal the endings. This will guarantee that our measurements are highly accurate and unaffected by humidity. We will perform several environmental tests such as local humidity chamber, actual humid environments, 24 hours water submerging, 24 hours liquid nitrogen submerging, etc.

Anticipated Benefits

Oil and Gas industry as well as Spacex would be primary beneficiaries of this technology.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Armstrong Flight Research Center(AFRC)	Lead Organization	NASA Center	Edwards, California
●Marshall Space Flight Center(MSFC)	Supporting Organization	NASA Center	Huntsville, Alabama

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Primary U.S. Work Locations

California

Project Website:

https://www.nasa.gov/directorates/spacetech/innovation_fund/index.html#.VC

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Armstrong Flight Research Center (AFRC)

Responsible Program:

Center Innovation Fund: AFRC CIF

Project Management

Program Director:

Michael R Lapointe

Program Manager:

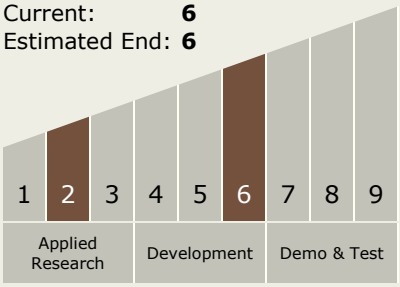
David F Voracek

Principal Investigators:

Allen R Parker
Shideh Naderi

Technology Maturity (TRL)

Start: **2**
Current: **6**
Estimated End: **6**



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Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.3 In-Situ Instruments and Sensors
    - TX08.3.5 Electromagnetic Wave Based Sensors

Target Destination

Earth